

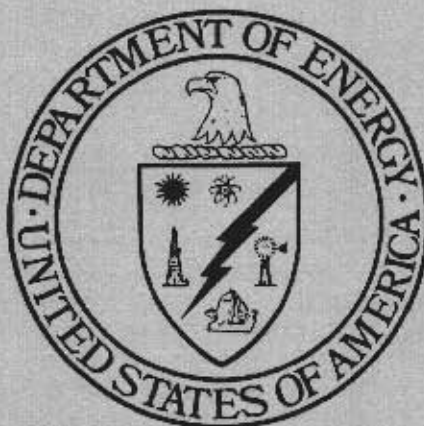


Sandia National Laboratories / New Mexico

**PROPOSAL FOR NO FURTHER ACTION
ENVIRONMENTAL RESTORATION PROJECT
SITE 39, OIL SPILL - SOLAR FACILITY
OPERABLE UNIT 1335**

June 1995

**Environmental
Restoration
Project**



**United States Department of Energy
Albuquerque Operations Office**

PROPOSAL FOR ADMINISTRATIVE NO FURTHER ACTION

Site 39, Oil Spill - Solar Facility
Operating Unit 1335

SANDIA NATIONAL LABORATORIES/NEW MEXICO



1. Introduction

1.1. ER Site Identification Number and Name

Sandia National Laboratories/New Mexico (SNL/NM) is proposing an administrative No Further Action (NFA) decision for Environmental Restoration (ER) Site 39, Oil Spill, Solar Facility, OU 1335.

1.2 SNL /NM Administrative NFA Process

This proposal for a determination of an administrative NFA decision has been prepared using the criteria presented in Section 4.5.3 of the SNL/NM Program Implementation Plan (SNL/NM February 1994) (Ref. 1). Specifically, this proposal will "contain information demonstrating that there are no releases of hazardous waste (including hazardous constituents) from solid waste management units (SWMUs) at the facility that may pose a threat to human health or the environment" [(as proposed in the Code of Federal Regulations (CFR) Section 40 Part 264.51(a) (2)] (Ref. 2). The HSWA Module IV contains the same requirements for an NFA demonstration:

Based on the results of the RFI [RCRA Facility Investigation] and other relevant information, the Permittee may submit an application to the Administrative Authority for a Class III permit modification under 40 CFR 270.42(c) to terminate the RFI/CMS [corrective measures study] process for a specific unit. This permit modification application must contain information demonstrating that there are no releases of hazardous waste including hazardous constituents from a particular SWMU at the facility that pose threats to human health and/or the environment, as well as additional information required in 40 CFR 270.42(c) (Ref. 3).

In requesting an administrative NFA decision for ER Site 39, Oil Spill Facility, this proposal is using existing administrative/archival information to satisfy the permit requirements. This unit is eligible for an administrative NFA proposal based on one or more of the following criteria taken from the RCRA Facility Assessment (RFA) Guidance (Ref. 4):

Criterion A: The unit has never contained constituents of concern

Criterion B: The unit has design and/or operating characteristics that effectively prevent releases to the environment

Criterion C: The unit clearly has not released hazardous waste or constituents into the environment

Specifically, ER Site 39 is being proposed for an administrative NFA decision because the unit has design and/or operating characteristics that effectively prevent releases to the environment (Criterion B) and has not released hazardous waste or constituents into the environment (Criterion C).

1.3 Local Setting

SNL/NM occupies 2,829 acres of land owned by the Department of Energy (DOE) , with an additional 14,920 acres of land provided by land-use permits with Kirtland Air Force Base (KAFB), the United States Forest Service (USFS), the State of New Mexico, and the Isleta Indian Reservation. SNL/NM has been involved in nuclear weapons research, component development, assembly, testing, and other nuclear activities since 1945.

The terrain is flat with some vegetation, primarily sage and tumbleweeds. The shallow subsurface geology is comprised of alluvial sediments, clay to gravel/cobble size. The site occurs in an area of SNL/NM with considerable geological structural complexity. Several major fault systems with different orientations and offsets may intersect the area. Depth to ground water is unknown and may vary across the site because of complex geology. Depth to the water table measured in the surrounding area has ranged from approximately 90 to 500 feet.

2. History of SWMU

2.1 Sources of Supporting Information

In preparing to request an administrative NFA decision for ER Site 39, a background study was conducted to collect available and relevant site information. Background information sources included existing records and reports of site activity. In addition, interviews were conducted with SNL/NM staff and contractors familiar with site operational history. The study was completely documented and has provided traceable references which sustain the integrity of this proposal.

The following information sources, hierarchically listed with respect to assigned validity, were available for use in the evaluation of ER Site 39:

- Two interviews with two facility personnel, current and retired, who were directly involved with the oil spill incident.
- Miscellaneous information sources including SNL/NM personnel correspondence (memorandums, letters, and notes regarding ER Site 39).
- Photographs and field notes from numerous site inspections conducted by SNL/NM staff.
- The Comprehensive Environmental Assessment and Response Program (CEARP) Phase I Report (Ref. 5) and CEARP records (copy located in the Environmental Operations Record Center).
- The RCRA RFA report (Ref. 6).

Utilizing this information, a brief history of ER Site 39 and a discussion of all relevant evidence regarding past waste practices and releases at the site have been prepared and are presented in this proposal for an administrative NFA decision.

2.2 Previous Audits, Inspections and Findings

According to the CEARP (Ref. 5), in 1980 a forklift overheated, caught fire, and caused a small amount of diesel fuel to leak from the forklift's fuel tank. The total volume of fuel released is unknown although the estimated capacity of the tank is about 20 gallons. The fuel caught fire and burned on a large asphalt pad where the forklift was parked at the Solar Facility. The spill/fire area was confined to a 30 feet diameter circle (Refs. 5, and 6). According to the CEARP, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) findings for the Federal Facility Site Discovery and Identification Findings (FFSDIF), Preliminary Assessment (PA), and Preliminary Site Investigation (PSI), were negative. The site ranking in the Hazard Ranking System (HRS) was zero, and no further action was planned.

2.3 Historical Operations

The Solar Facility is located on Kirtland Air Force Base south of Manzano Base and south of Magazine Road, west of Thunder Range. The Solar Facility is used to perform experiments using solar energy, and consists of a large array of mirrors on an asphalt pad, which are focused at a target on the solar tower (Fig. 1). The fuel oil spill was on this asphalt pad about 250 feet southeast of the Solar Tower (Refs. 7, 8, and 9). According to site personnel (Refs. 7, 8, and 9), a construction project which required the use of an 18,000-pound forklift was underway in the fall of 1980 at the Solar Tower. The temperature was very cold, so when the forklift was left on the asphalt pad overnight, a block heater was attached to the engine to keep it warm so it would start the following work day. The system was left on over a weekend and evidently a circuit failure caused a fire. Upon returning after the weekend, workers found the forklift completely burned.

According to two individuals who were involved in the operation, (Refs. 8 and 9) the forklift was parked about 250 feet south of the Solar Tower on a large asphalt area at the time of the incident. The fire released the diesel fuel and oil in the forklift, where it ran downhill on the asphalt for about 20 feet. The spilled petroleum products, as well as some tar in the asphalt, burned completely (Refs. 8 and 9). After it burned, there was no residual fuel left from the diesel fuel fire to be cleaned up.

3. Evaluation of Relevant Evidence

3.1 Unit Characteristics

The spill of diesel fuel was contained entirely on a large asphalt pad and burned completely. Some tar in the asphalt caught fire but did not burn through the asphalt. The diesel fuel did not penetrate the asphalt, thus there was no release of fuel to the underlying soil.

3.2 Operating Practices

The release occurred after working hours. When employees returned the next work day, the fuel had been completely consumed by the fire. Spill response cleanup was not required.

3.3 Presence or Absence of Visual Evidence

A visit to the site by the SNL/NM ER Task Leader in 1992 (Ref. 8) and more recently on February 23, 1995, by the SNL/NM ER Assistant Task Leader with representatives from the New Mexico Environmental Department (NMED), Environmental Protection Agency (EPA), and DOE (Ref. 10) visually confirmed the fire and spill were completely contained on the asphalt pad with a wide margin, approximately 100 feet, of pavement existing between the fire area and the exposed soil. It was also evident the asphalt pad was not penetrated by the fire. These observations are supported by the photographic evidence shown in Figure 2.

3.4 Results of Previous Sampling Surveys

Since the diesel fuel did not breach the asphalt or run off of the pad, no sampling surveys were conducted at this site.

3.5 Assessment of Gaps in Information

There were no data gaps in the available information. The facts gathered from the interviews (i.e., the extent of the spill on asphalt and the containment and the complete consumption of the fuel by fire) have been supported by photographic evidence.

3.6 Rationale for pursuing an administrative NFA decision

SNL/NM is proposing an administrative NFA decision for ER Site 39 because the unit has design and/or operating characteristics that effectively prevent releases to the environment (Criterion B), and the unit has clearly not released hazardous material to the environment (Criterion C).

This is supported by the following evidence as discussed previously:

1. Several individuals involved with activities at the site state that the spilled diesel fuel was confined to the asphalt pad where the forklift was parked, and no residual fuel was left after it burned, to be carried off to the surrounding soils. NMED and EPA visually confirmed this to be the case during the February 1995 site visit.
2. Evidence is corroborated by photographs of the spill showing the extent of the burn (Figure 2).
3. The site was listed as an SWMU as a result of 1985 CEARP interviews in which site personnel described the incident. The site however does not qualify as an

SWMU since it does not fit the "routine and systematic" release criterion described in the preamble to proposed Subpart S (Ref. 11) stating that; "a one time spill of hazardous waste would not be considered a solid waste management unit."

4. Conclusion

Based on evidence cited above, no potential remains for a release of hazardous waste (including hazardous constituents) which may pose a threat to human health or the environment. Therefore ER Site 39 is recommended for an NFA determination.

5. References¹

Sandia National Laboratories/New Mexico (SNL/NM), February 1994, draft. "Program Implementation Plan for Albuquerque Potential Release Sites," Sandia National Laboratories, Albuquerque, New Mexico.

U.S. Environmental Protection Agency (EPA), July 1990. "Corrective Action for Solid Waste Management Units (SWMU) at Hazardous Waste Management Facilities Proposed Rule," *Federal Register*, Vol. 55, Title 40, Parts 264, 265, 270 and 271.

U.S. Environmental Protection Agency (EPA), August 1993. "Module IV of RCRA Permit No. NM 5890110518, EPA Region VI," issued to Sandia National Laboratories, Albuquerque, New Mexico.

US Environmental Protection Agency (EPA), October 1986. "RCRA Facility Assessment Guidance," EPA/530-86-053, PB87-107769, Washington DC.

U.S. Department of Energy (DOE), September 1987. "Comprehensive Environmental Assessment and Response Program, Phase I Installation Assessment Sandia National Laboratories - Albuquerque," Department of Energy Albuquerque Operations Office, Environment, Safety, and Health Division, Environmental Programs Branch, Albuquerque, New Mexico.

U.S. Environmental Protection Agency (EPA), April 1987, RCRA Facility Assessment Draft Report, "Final RCRA Facility Assessment Report of Solid Waste Management Units at Sandia National Laboratory, Albuquerque New Mexico," EPA, Washington, DC.

Gaither, K. Memorandum to W. Cox, "ER Site 39 Oil Spill - Solar Facility." Nov. 20, 1992a.

Gaither K. Field notes from ADS 1335 Site File: Site 39. Nov. 17, 1992b.

¹ Since many of the tests conducted at Sandia National Laboratories are classified, the SNL/NM Reference Numbers refer to the Sandia Records Center Coding System which is intended to maintain the confidentiality of SNL/NM employees

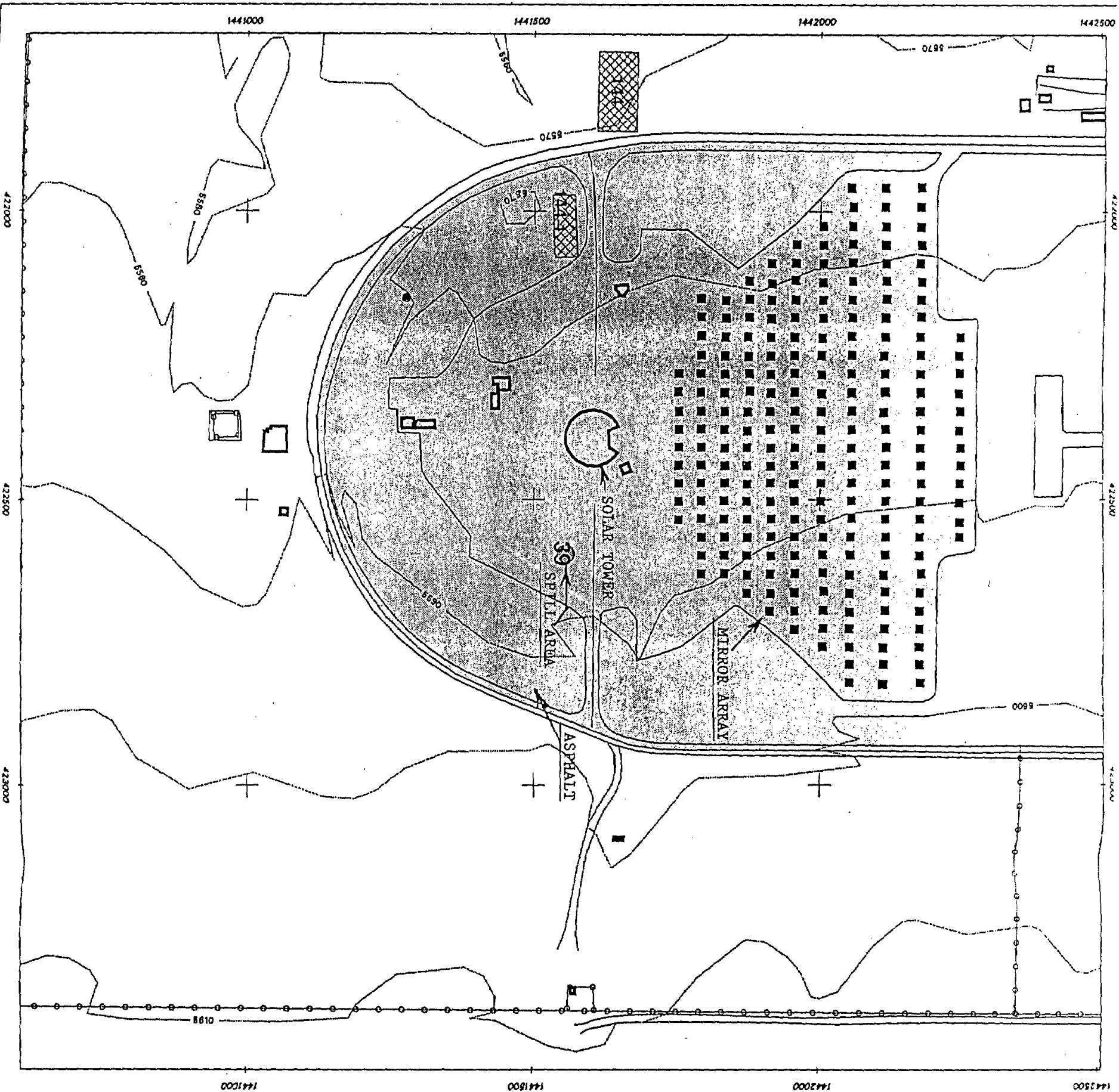
Sandia National Laboratories New Mexico (SNL/NM) Records Center Reference Number 7585/1332/39/Int/94-008.

Wrightson, S. Field notes from ADS 1335 Site File: Site 39. Feb. 23, 1995.

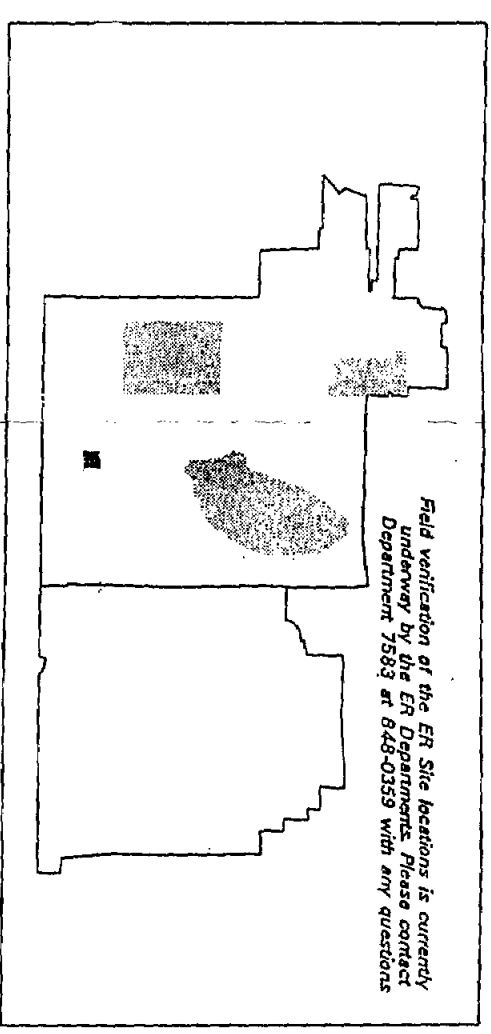
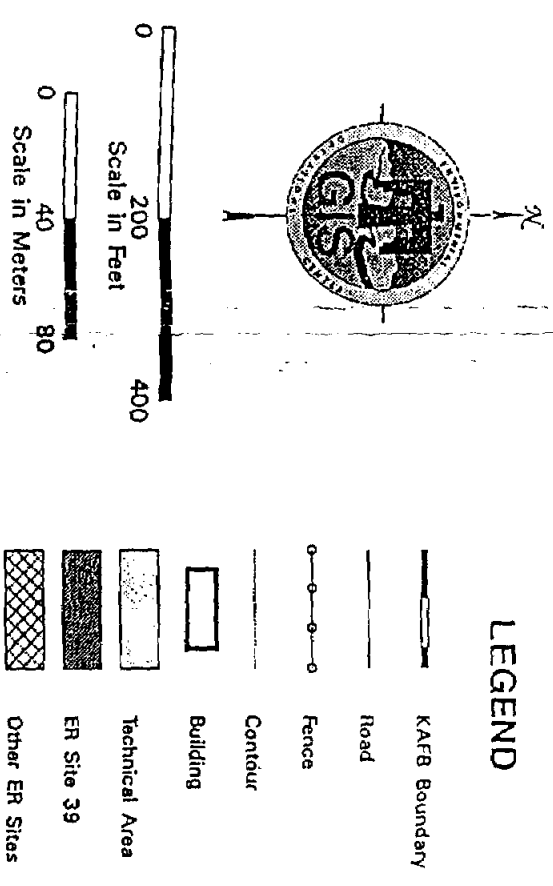
U.S. Environmental Protection Agency (EPA), July 1990, "Corrective Action for Solid Waste Management Units (SWMU) at Hazardous Waste Management Facilities Proposed Rule," *Federal Register*, Vol. 55, Title 40, pp. 30798, 30800.

Byrd, C., Memorandum to D. Bleakly, "Southwest Test Area ADS 1335 (formerly 1298) - Updated Site Descriptions." Nov. 11, 1993.

U.S. Environmental Protection Agency (EPA), August 1992, Hazardous Waste Management Facility Permit No. NM 5890110518, EPA Region VI, issued to Sandia National Laboratories, Albuquerque, New Mexico.



LEGEND



Sandia National Laboratories, New Mexico Environmental Operations Geographic Information System

FIGURE 1

Environmental Restoration Site Atlas ER Site No. 39 Oil Spill - Solar Facility

Compiled by photogrammetric methods from aerial photography dated March 1989, March 1990, September 1991 and July 1992
Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone
1927 North American Horizontal Datum, 1923 North American Vertical Datum



Figure 2. Solar Facility - Arrow shows site of release on asphalt